USGS
science for a changing world

Mineral Industry Surveys

For information, contact:
John F. Papp, Chromium Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4963, Fax: (703) 648-7757
E-mail: jpapp@usgs.gov

Joseph M. Krisanda (Data)
Telephone: (703) 649-7987
Fax: (703) 648-7975

Internet: http://minerals.usgs.gov/minerals

CHROMIUM IN JUNE 2003

On the basis of gross weight, consumption of chromium ferroalloys and metal in June 2003 decreased slightly compared with consumption in May 2003, according to the U.S. Geological Survey.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of chromium materials in June 2003, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of June 2003, and U.S. foreign trade data for selected chromium-containing materials in May 2003.

Update

The Defense National Stockpile Center (DNSC) reported the sale of 5,443 metric tons of ferrochromium valued at $3.3 million in July under Basic Ordering Agreement DLA-Ferrochromium-004 (Defense National Stockpile Center, 2003). The sale comprised 4,536 tons of high-carbon ferrochromium and 907 tons of low-carbon ferrochromium.

Reference Cited

Defense National Stockpile Center, 2003, Stockpile announces ferrochromium sales for July 2003: Defense National Stockpile Center, News Release DNSC-03-2334, August 5, 1 p.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS[1]

(Metric tons, gross weight)

	2002	2003				
	January-December[2]	First quarter	April	May	June	January-June[2]
Production:						
Stainless steel production[3]	2,180,000 [4]	544,000	206,000	185,000	179,000	1,110,000 [4]
Components of U.S. supply:						
Stainless steel scrap receipts	815,000	197,000	74,000	64,300	52,400	388,000
Stainless steel scrap consumption	1,190,000	280,000	101,000	87,100	79,100	547,000
Imports for consumption:						
Chromite ore	112,000	61,300	574	3,900	NA	65,700 [5]
Ferrochromium:						
More than 4% carbon	283,000	96,800	53,200	10,200	NA	160,000 [5]
More than 0.5%, but not more than 3% carbon	8,040	3,160	520	240	NA	3,920 [5]
Not more than 0.5% carbon	25,600	6,430	921	1,790	NA	9,140 [5]
Ferrochromium silicon	28,900	3,350	7,550	4,000	NA	14,900 [5]
Total ferroalloy imports	345,000	110,000	62,200	16,300	NA	188,000 [5]
Chromium metal[6]	7,430 [7]	2,200 [7]	661 [7]	1,200	NA	4,060 [5]
Stainless steel	752,000	161,000	57,600	53,300	NA	272,000 [5]
Stainless steel scrap	81,000	16,300	7,110	6,150	NA	29,500 [5]
Distribution of U.S. supply:						
Industry consumer, chromium ferroalloys and metal	384,000	94,500 [r]	35,100	31,000 [r]	30,100	191,000
Exports:						
Chromite ore	24,300	1,790	1,900	444	NA	4,130 [5]
Chromium ferroalloys:						
High-carbon ferrochromium	13,500	591	188	259	NA	1,040 [5]
Low-carbon ferrochromium	2,070	440	183	58	NA	682 [5]
Ferrochromium silicon	281	--	19	--	NA	19 [5]
Total ferroalloy exports	15,900	1,030	390	317	NA	1,740 [5]
Chromium metal	745 [7]	210 [7]	64 [7]	72	NA	346 [5]
Stainless steel	273,000	76,100	27,900	34,200	NA	138,000 [5]
Stainless steel scrap	342,000	177,000	38,400	31,800	NA	247,000 [5]
Stocks at end of period:						
Industry consumer, Chromium ferroalloys and metal	13,900	XX	29,600	32,400	W	XX
Government stockpile:						
Chromite ore	204,000	XX	176,000	176,000	155,000	XX
Chromium ferroalloys	763,000	XX	733,000	728,000	723,000	XX
Chromium metal	7,220	XX	7,210	7,160	7,160	XX

[r]Revised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

[4]Includes revised data which is not broken out by specific month.

[5]Includes January through May data; June data not available.

[6]Includes waste and scrap and other.

[7]Data revised by addition of unwrought powders to chromium metal category.

TABLE 2

U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS IN 2003[1]

(Metric tons, gross weight unless otherwise noted)

	May	June	January-June[2]
Consumption by end use:			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	253 r	275	1,680
High-strength low-alloy steel	553 r	546	3,240
Stainless and heat-resisting steel	26,800	25,600	165,000
Full alloy steel	1,230	1,200	7,880
Electrical steel	W	W	W
Tool steel	476	682	2,930
Unspecified Steel	W	W	W
Cast irons	W	W	W
Superalloys	666 r	730	4,000
Other alloys[3]	90	122	561
Total	31,000 r	30,100	191,000
Total, chromium content	18,300	17,500	112,000
Consumption by material:			
Low-carbon ferrochromium	1,690	1,890	10,900
High-carbon ferrochromium	25,800	24,600	157,000
Ferrochromium silicon	2,970	3,050	19,500
Chromium metal	332 r	403	2,010
Chromite ore	W	W	W
Chromium-aluminum alloy	39 r	51	222
Other chromium materials	W	W	W
Total	31,000 r	30,100	191,000
Total, chromium content	18,300	17,500	112,000
Consumer stocks:			
Low-carbon ferrochromium	1,480	1,520	XX
High-carbon ferrochromium	W	W	XX
Ferrochromium silicon	787	1,030	XX
Chromium metal	209 r	173	XX
Chromite ore	W	W	XX
Chromium-aluminum alloy	67	34	XX
Other chromium materials	21	33	XX
Total	32,400	(4)	XX
Total, chromium content	19,600	(4)	XX

[r]Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Includes welding and alloy hard-facing rods and materials, wear- and corrosion-resistant alloys, and aluminum, copper, magnetic, nickel, and other alloys.

[4]Total withheld to avoid disclosing company proprietary data.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY OF CHROMIUM MATERIALS[1, 2]

(Metric tons)

Period	Chromite ore		Chromium ferroalloys		Chromium metal
	Chemical	Refractory	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2002:					
June	78,300	175,000 [3]	374,000	163,000	7,210
July	78,300	175,000	372,000	163,000	7,210
August	78,300	113,000	547,000 [3]	235,000 [3]	7,220 [3]
September	78,300	113,000	544,000	234,000	7,220
October	78,300	127,000 [3]	536,000	233,000	7,220
November	78,300	127,000	535,000	232,000	7,220
December	78,300	126,000	531,000	232,000	7,220
2003:					
January	78,300	126,000	527,000	231,000	7,220
February	78,300	126,000	521,000	229,000	7,220
March	78,300	98,000	517,000	228,000	7,210
April	78,300	98,000	505,000	228,000	7,210
May	78,300	98,000	501,000	227,000	7,160
June	71,500	83,700	497,000	226,000	7,160

[1]Data are rounded to no more than three significant digits.

[2]These Government stocks are reported by the Defense National Stockpile Center in Inventory of Stockpile Materials R-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract; however, the material has not yet been shipped. For chromium materials, the R-1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The R-1 report excludes chromium materials that are committed and awaiting shipment.

[3]The increase resulted from the reclassification of physical inventory from committed to uncommitted. It does not result from the addition of chromium materials to the stockpile.

Source: Defense National Stockpile Center.

TABLE 4

U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL[1]

Period	Chromite ore		Chromium ferroalloys[2]			Chromium metal[3]	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2002:							
May	494	$153	774	452	$686	84	$990
June	17,200	824	456	261	416	55	595
July	335	89	394	240	369	47	525
August	345	61	771	469	577	68	652
September	458	171	664	394	589	44	651
October	2,490	842	9,880	6,460	4,650	72	625
November	456	122	520	307	462	69	671
December	415	93	296	178	288	71	597
January-December	24,300	4,070	15,900	10,100	10,100	745	7,450
2003:							
January	747	280	483	290	472	74	507
February	442	159	196	111	230	47	499
March	596	166	352	217	445	89	589
April	1,900	209	390	230	439	64	877
May	444	124	317	190	276	72	914
January-May	4,130	938	1,740	1,040	1,860	347	3,390

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes low-, medium-, and high-carbon ferrochromium and ferrochromium silicon.

[3]Includes chromium metal waste and scrap and unwrought powders.

Source: U.S. Census Bureau.

TABLE 5

U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL[1]

(Metric tons)

	2002	2003		
	January-December[2]	April	May	January-May[2]
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	1,080	77	--	77
Chromic oxide content	301	24	--	24
More than 40% but less than 46% chromic oxide:				
Gross weight	10,600	86	186	568
Chromic oxide content	4,470	40	NA	NA
46% or more chromic oxide:				
Gross weight	100,000	411	3,720	65,100
Chromic oxide content	46,700	204	NA	NA
Total, all grades:				
Gross weight	112,000	574	3,900	65,700
Chromic oxide content	51,500	268	NA	NA
Ferrochromium:				
Low-carbon:[3]				
Not more than 0.5%:				
Gross weight	25,600	921	1,790	9,140
Chromium content	17,000	633	1,250	6,330
More than 0.5% but not more than 3%:				
Gross weight	8,040	520	240	3,920
Chromium content	4,960	358	148	2,670
Total, low-carbon:				
Gross weight	33,600	1,440	2,030	13,100
Chromium content	21,900	991	1,390	9,000

See footnotes at end of table.

TABLE 5--Continued
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL[1]

(Metric tons)

	2002	2003		
	January-December[2]	April	May	January-May[2]
Ferrochromium:				
High-carbon:[4]				
Gross weight	283,000	53,200	10,200	160,000
Chromium content	169,000	32,900	7,140	92,100
Total, all grades:				
Gross weight	316,000	54,600	12,300	173,000
Chromium content	191,000	33,900	8,540	101,000
Chromium metal:				
Unwrought powders	766	182	302	1,020
Other than waste and scrap	6,570	472	797	2,790
Waste and scrap and unwrought powders	93	7	100	241
Total, all grades	7,430	661	1,200	4,060

NA Not available. XX Not applicable. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Ferrochromium containing not more than 3% carbon.

[4]Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE IN 2003, BY GRADE AND BY COUNTRY[1]

	May			January-May[2]		
Grade and country	Gross weight (metric tons)	Cr_2O_3 (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Cr_2O_3 (metric tons)	Value[3] (thousands)
Not more than 40% chromic oxide, South Africa	--	--	--	77	24	$30
More than 40% but less than 46% chromic oxide, South Africa	186	NA	$28	568	NA	85
46% or more chromic oxide, South Africa	3,720	NA	1,160	65,100	NA	4,200
Total	3,900	NA	1,190	65,700	NA	4,310

NA Not available. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.

TABLE 7

U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2003, BY GRADE AND BY COUNTRY[1]

Grade and country	May			January-May[2]		
	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)
High-carbon ferrochromium:[4]						
China	--	--	--	20	14	$25
Kazakhstan	10,200	7,140	$5,830	56,100	38,700	28,600
Russia	--	--	--	150	144	85
South Africa	--	--	--	87,500	43,300	25,900
Zimbabwe	--	--	--	16,400	9,990	6,050
Total	10,200	7,140	5,830	160,000	92,100	60,700
Low-carbon ferrochromium:[5]						
More than 0.5% but not more than 3% carbon:						
Kazakhstan	--	--	--	50	345	418
Mexico	--	--	--	1,550	1,250	1,050
Russia	--	--	--	11	5	12
South Africa	240	148	157	1,860	1,070	954
Total	240	148	157	3,920	2,670	2,440
Not more than 0.5% carbon:						
China	--	--	--	40	27	48
Germany	198	141	275	1,580	1,110	2,940
Japan	--	--	--	795	549	1,640
Kazakhstan	300	211	273	664	469	593
Mexico	--	--	--	200	156	177
Russia	1,270	880	1,330	5,710	3,920	5,340
South Africa	--	--	--	40	25	30
Turkey	20	15	22	120	81	170
Total	1,790	1,250	1,900	9,140	6,330	10,900
All grades:						
China	--	--	--	60	41	74
Germany	198	141	275	1,580	1,110	2,940
Japan	--	--	--	795	549	1,640
Kazakhstan	10,500	7,350	6,100	57,300	39,500	29,600
Mexico	--	--	--	1,750	1,410	1,230
Russia	1,270	880	1,330	5,870	4,070	5,440
South Africa	240	148	157	89,400	44,400	26,900
Turkey	20	15	22	120	81	170
Zimbabwe	--	--	--	16,400	9,990	6,050
Total	12,300	8,540	7,890	173,000	101,000	74,100

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May included revised data.

[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

[4]Ferrochromium containing more than 4% carbon.

[5]Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION
OF CHROMIUM METAL IN 2003, BY GRADE AND BY COUNTRY[1]

Grade and country	May		January-May[2]	
	Gross weight (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Value[3] (thousands)
Unwrought powders:[4]				
China	--	--	23	$93
Germany	--	--	7	78
Japan	26	$151	100	994
Kazakhstan	--	--	74	229
Russia	115	991	383	2,960
United Kingdom	161	742	435	2,060
Total	302	1,880	1,020	6,410
Waste and scrap:				
Germany	--	--	9	166
Japan	--	--	22	152
Korea, Republic of	--	--	3	15
Malaysia	--	--	1	3
Russia	100	352	200	713
Singapore	--	--	1	5
United Kingdom	--	--	5	61
Total	100	352	241	1,120
Other than waste and scrap and unwrought powders:				
Austria	--	--	(5)	3
Belgium	18	110	18	110
China	100	356	588	2,080
Finland	--	--	(5)	7
France	73	465	637	4,770
Germany	(5)	17	51	285
India	--	--	(5)	2
Italy	--	--	(5)	3
Kazakhstan	220	702	257	830
Russia	180	625	522	1,810
Singapore	--	--	(5)	11
Spain	--	--	4	17
Switzerland	(5)	7	(5)	18
Taiwan	--	--	(5)	4
United Kingdom	206	1,180	715	4,450
Total	797	3,470	2,790	14,400
All grades:				
Austria	--	--	(5)	3
Belgium	18	110	18	110
China	100	356	611	2,170
Finland	--	--	(5)	7
France	73	465	637	4,770
Germany	(5)	17	67	530
India	--	--	(5)	2
Italy	--	--	(5)	3
Japan	26	151	122	1,150
Kazakhstan	220	702	331	1,060
Korea, Republic of	--	--	3	15
Malaysia	--	--	1	3
Russia	395	1,970	1,110	5,480
Singapore	--	--	1	16
Spain	--	--	4	17
Switzerland	(5)	7	(5)	18
Taiwan	--	--	(5)	4
United Kingdom	367	1,930	1,160	6,570
Total	1,200	5,700	4,060	21,900

See footnotes at end of table.

TABLE 8--Continued
U.S. IMPORTS FOR CONSUMPTION
OF CHROMIUM METAL IN 2003, BY GRADE AND BY COUNTRY[1]

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]May include revised data.
[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.
[4]Separate category reported starting May 2003.
[5]Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 9
U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2003[1]

	May		January-May	
Stainless steel product	Gross weight (metric tons)	Value[2] (thousands)	Gross weight (metric tons)	Value[2] (thousands)
Exports:				
Ingot	373	$3,190	2,010	$15,400
Flat-rolled (width > 600 mm)	19,000	33,700	71,800	137,000
Flat-rolled (width < 600 mm)	8,700	22,600	39,500	94,800
Bars and rods in irregular coils	214	524	889	2,420
Other bars and rods	2,300	11,100	7,270	37,100
Wire	766	4,800	3,700	22,500
Tubes, pipes, hollow profiles	2,800	12,800	13,000	57,100
Total	34,200	88,800	138,000	366,000
Stainless steel scrap	31,800	27,400	247,000	146,000
Grand total	65,900	116,000	385,000	512,000
Imports:				
Ingot	15,200	21,500	68,700	95,200
Flat-rolled (width > 600 mm)	19,600	33,200	104,000	167,000
Flat-rolled (width < 600 mm)	2,430	8,110	17,300	50,300
Bars and rods in irregular coils	2,590	4,320	16,500	26,600
Other bars and rods	5,370	12,000	26,800	59,700
Wire	2,570	8,180	13,500	40,400
Tubes, pipes, hollow profiles	5,530	21,000	25,500	101,000
Total	53,300	108,000	272,000	540,000
Stainless steel scrap	6,150	3,700	29,500	19,900
Grand total	59,400	112,000	301,000	560,000

[1]Data are rounded to no more than three significant digits; may not add to totals
[2]Export value is free alongside ship (f.a.s.). Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.